

SPECIAL REPORT

OF THE

Commissioner of the Second Swamp Land District,

SUBMITTING ENGINEER'S REPORT

OF THE

SURVEY OF THE VALLEY OF LAFOURCHE AND TERREBONNE,

TO THE

GENERAL ASSEMBLY.

BATON ROUGE:

J M TAYLOR, STATE PRINTER.

1859.

R E P O R T .

*To the Honorable the Senate and House of Representatives
of the State of Louisiana, in General Assembly convened :*

Herewith I have the honor to submit the report of the Engineer concerning the survey of the territory situated between the Bayous Terrebonne and Lafourche, made under my directions, in accordance with the provisions of Act No. 273, of 1858.

This survey has fully demonstrated the practicability of draining this extensive and valuable section, and at a cost comparatively cheap; and I earnestly request that an additional amount of forty thousand dollars be appropriated from the Swamp Land Funds coming to the Second District, in order to carry out the suggestions of the Engineer.

Respectfully submitted.

LAFAYETTE CALDWELL,
Commissioner Second Swamp Land District.

BATON ROUGE, March 7, 1859.

BATON ROUGE, March 4th. 1859.

COL. LAFAYETTE CALDWELL,

Commissioner Second Swamp Land District :

SIR—Agreeably to a contract with you, dated October 15th, 1858, for making a topographical survey, plan and estimates of the cost of draining the swamp lands in the entire valley situated between the Bayou Lafourche and the Bayou Terrebonne, having now accomplished the same, I have the honor to hand you the report, with plan and estimates herewith, as required.

Upon commencing the necessary reconnoissances for the execution of the work entrusted to me, I immediately formed a full topographical party at

Baton Rouge, and proceeded to the town of Thibodaux, which heads this valley, where I commenced instrumental operations, with both level and compass, and ran down the boundary lines of the entire valley, clear down to the Gulf of Mexico.

The distance of Bayou Lafourche to its mouth at Bell Pass, from Thibodaux, is 81 miles 8-100, and the distance of Bayou Terrebonne is 63 miles, 6-100, to its mouth at Pass Caillon. The average of levels, compared on banks of both bayous, is over 24 feet from the point, at highest water mark in Bayou Lafourche, to the lowest tide water mark in the Gulf, and about 18 feet 20-100 from the natural level of the ground at the head of the valley.

The average of cross sections, from the bank of those bayous, taken back in the interior, to the lowest surface ground of the swamps, has a fall from four to three feet, in the whole of the upper portion of the valley; thus leaving, at a medium distance of about twenty-five miles down, a fall of eight feet, at least, to all swamps, which can be drained into nearest point of the low tide-water.

This preliminary examination induced me to endeavor to discover all the obstructions by which the immense mass of drainage and crevasse water is confined constantly in the upper portions of the valley. I have made, then, a thorough and scrupulous examination and levels in the whole interior, meandered every bayou, lake, or ridge, etc.; connecting all present operations with the surveys I have executed before for the United States, in the past four or five years; and as the result of my labors enabled me to prepare a true topographical map of all the interior, I would respectfully submit to you the following developments:

The entire valley, situated between the Bayou Lafourche and the Bayou Terrebonne, is naturally divided in the following parts:

First valley or basin, between the Bayou Lafourche and the ridge of Bayou Blue; second valley, between the ridge of Bayou Blue and Bayou Terrebonne; third valley, between the Bayou Lafourche and the ridge of Point-au-Chien; fourth valley, between the ridge of Point-au-Chien and Bayou Terrebonne—this last embracing the ridge of Point Barré and Point Jean Charles; fifth, territory of salt marshes and lakes, comprising the islands as far as the Gulf of Mexico, into which the four former valleys discharge their fresh drainage water.

This embracement of highways and ridges, is the principal bar to the tendency of the natural fall and drainage, but the chain of connection through a canal, will cause immediate relief to the waters.

The basin between the Bayou Lafourche and surrounding ridge of Bayou Blue, which is elevated from three to four feet above all the surface of the prairie, not having a sufficient interior outlet, has formed the extensive Lakes Fields, etc., and they are increasing gradually.

The inhabitants of Bayou Lafourche, for over thirty miles down from Lockport, suffer annually damages to their crops and lands, such as they cannot often repair, and abandon their homes and property, which could be made as valuable as on the Mississippi River, with the rich back soil. This standing water ruins an immense quantity of the best State lands, and endangers all the settlers of the interior and inhabitants of the Bayou Terrebonne. Yet the scattered and deadened trees of oaks, cypress, etc., present a picture of desolation through the whole interior.

At the head of this valley there is a railroad, connecting it with New Orleans and the western portion of the State; and at a distance of twenty-two miles down from Lockport, crosses a company canal, connected with the lakes, and embraced between the banks of Bayou Terrebonne and Bayou Lafourche. This canal, although it has some utility, at present, for the transportation of sugar, keeps rather a dangerous position at the state of high water, towards the inundation of the inhabitants of the Bayou Terrebonne, having over five feet of immediate fall from the surface water of Lakes Fields and Long, and about 10 feet 75-100 from a point of high water mark in Bayou Lafourche.

When the interior swamps and lakes are drained, if the inhabitants and present proprietors will dig out this canal, to the low water of Terrebonne, it will have better advantages and direct communication; and, at the same time, it would greatly improve the navigation of Bayou Terrebonne, by receiving its water.

I have surveyed the whole of that portion of the interior, and there is but a small outlet from the lower end of the upper Lake Fields, called "Bayou L'eau Bleu," having an average width of about thirty feet, for a distance of nearly thirty miles, and is excessively crooked, and partly stopped up with grass of floating prairies. This bayou crosses Bayou Blue Ridge, and then joins with Bayou called "Grand Bayou," at Lacroix Point, from where it has better capacity; and at sixty miles down, it discharges into low tide water of bay called "Hackberry." The fall through this bayou is 8 feet 20-100, and the average depth from 8 to 10 feet.

Bayou L'eau Bleu cannot possibly effect, but slowly, (in a very long dry season) the drainage of all the upper portion of the valley, and has no utility nor any capacity at the time of crevasse waters; therefore, I would not recommend any improvements on it, which would require enormous expense to the State.

I have examined already the old Cut-off, for a short distance, made by the State, under the direction of Col. Williams, long ago, to drain the waters of Lake Long into same Bayou L'eau Bleu, which proved the reverse of what was intended.

The surplus drainage water of Lake Fields passes through the company canal into Lake Long, from which the water backs all around, and forces on

the ridge of Bayou Blue wherever it can pass, showing the natural fall southward.

Having satisfactorily made the above reconnoissances, I also made similar reconnoissances in the valley between the Bayou Lafourche and the ridge of Bayou Point Chien, commencing at Lacroix Point on Bayou L'eau Bleu, and then meandering with Grand Bayou up to its head at the Grand Bayou Bay, which ends in the midst of trembling prairies. From that point, I ran a line in northwest direction, through a massive trembling prairie swamp, and across the ridge of Bayou Blue, a distance of 6 miles 20-100, to the lower end or bayou at Lake Long, where all the masses of the waters are retained principally by that ridge.

I most respectfully suggest to you, to use all your influence and exertions to have a canal made, connecting the lower end of Lake Long with the head of the Grand Bayou Bay, on the line above described. The fall on this canal would be nearly four feet, the depth in average 5 feet, and the distance 6 miles 20-100, with the width of 60 feet across trembling prairies, and but 0-25 of a mile through the ridge of Bayou Blue, with 100 feet of width. The natural strong current will deepen and enlarge the channel in the prairie.

This canal will lower immediately the lakes and all the upper interior swamps, and will protect the inhabitants of Bayou Lafourche and Terrebonne from the back crevasse water, which will pass also through this canal into Grand Bayou Bay. This bay has a sufficient capacity for over 3 miles 50-100 down to its lower end, at the beginning of Grand Bayou, where again this bayou is entirely stopped up with floating grass for a distance of over two miles, and the waters of the bay spreading on the whole prairie.

I have again run a line from that point, in a southward direction, across trembling prairies and the ridge of Bayou Point-au-Chien, on the other side into salt marshes, which resulted that, at 1 mile 80-100, I have connected the end of Grand Bayou Bay with the low tide-water in the Bayou Jean Lacroix, embraced between the ridges of Point-au-Chien and the ridge of Point Jean Charles. This bayou has an extraordinary current, and a depth of over 25 feet in average, and at about three miles down it empties into Lake Chien, which is the nearest salt water lake, of an extensive capacity, connecting with the Gulf, and is in the centre of the valley.

The importance of making a canal on this line, with the width of the former, through the ridge and trembling prairies, and but 1 mile 80-100 long, and fall of 3 feet 22-100, is almost natural, and of great benefit to the State, connecting the central drainage of the entire valley, and effecting the drainage of the whole interior.

The length of this central interior canal, connected with Grand Bayou Bay, would be 11 miles 50-100, with over eight feet fall, or same that

Bayou L'eau Bleu has in the distance of 60 miles, and I cannot doubt it would immediately drain entirely the whole of the upper portion of the valley, and consequently reclaim to the State, the extensive bodies of swamp lands now worthless, and benefit the whole of private property mostly adapted for sugar.

Total of State Public Lands, as estimated.....152,826 11-100 acres.

" " Private lands..... 55,687 46-100 "

Total of lands reclaimed.....208,514 27-100 "

Estimated area of salt territory and islands.....200,000 "

Estimated surface area embraced in the entire

valley.....408,514 17-100 acres.

Having but a few days ago returned from the field operations of that interior, and in compliance with my promise of making you the report during this session of the Legislature, required by the same Act, No. 273, of 1858, the time being already delayed by the hardship of the performance, I am not able to give you now the particulars of all the cross section examinations, which I think would not be of much importance, and which you can judge better for yourself, from the map here annexed.

I regret, also, that in the short space of this surveying expedition, it was impossible for me to make a full re-examination of the drainage in the lower part of the parish of Lafourche, on the east side, but I would respectfully remark to you, as I have the same now in the course of performance that knowing the extent of that territory of swamp lands already, from the similar United States surveys before performed by myself, that the appropriation of \$10,000, under Act 206, of 1858, for reclaiming those lands would not be sufficient, therefore I would recommend to you, for the interest of the State, a further appropriation of \$10,000 to carry on the whole drainage of that portion of State lands in the lower part of Lafourche.

I would also respectfully suggest to you, that a dredge boat, for cutting canals through that section of the country, would be the true economy for the State, and facilitate the progress of the works.

In conclusion, I must pay a merited tribute to the inhabitants of Bayou Lafourche and Terrebonne, who kindly assisted me in all the drainage informations, and facilitated my efforts everywhere, as I thank all my party, and especially Mr. A. F. Wrotnowski, Assistant Engineer, for his untiring energy and skill in our practical operations.

Respectfully submitted,

JOS. GORLINSKI,

Civil Engineer.

*Estimates for the drainage of the Swamp Lands, situated in the entire valley,
between the Bayou Lafourche and the Bayou Terrebonne.*

FIRST SECTION.

Canal from lower end of Lake Long to the head of Grand Bayou Bay, 476 chains, trembling prairie, at \$5,000 per mile	\$29,500 00
Excavation across the ridge of Bayou Blue, 36,666 cubic yards, at 25 cents per yard.....	9,166 50
	<hr/>
	\$38,666 50

SECOND SECTION.

Canal from lower end of Grand Bayou Bay to Bayou Jean Lacroix, 148 chains trembling prairies, at \$5,000 per mile.....	\$9,250 00
Excavation through the ridge of Point-au-Chien, 24,444 cubic yards, at 25 cents per cubic yard.....	6,111 00
	<hr/>
	\$15,361 00
Total of both sections.....	54,027 50
Add 10 per cent for incidentals.....	5,402 75
	<hr/>
Total.....	\$59,430 25

JOS. GORLINSKI,
Civil Engineer.